

Solar 101

MEAM Conference – October, 2011
Jim Oliva, Regional Sales Manager
Real Goods Solar, Formerly Alteris Renewables



REALGOODS | SOLAR

What's New In Solar



- ▶ Net Metering/Grid Tied Systems
- ▶ Modules and Efficiency
- ▶ Financing
- ▶ Rebates and Incentives
- ▶ Payback & ROI
- ▶ Q & A

Net Metering/Grid Tied Systems

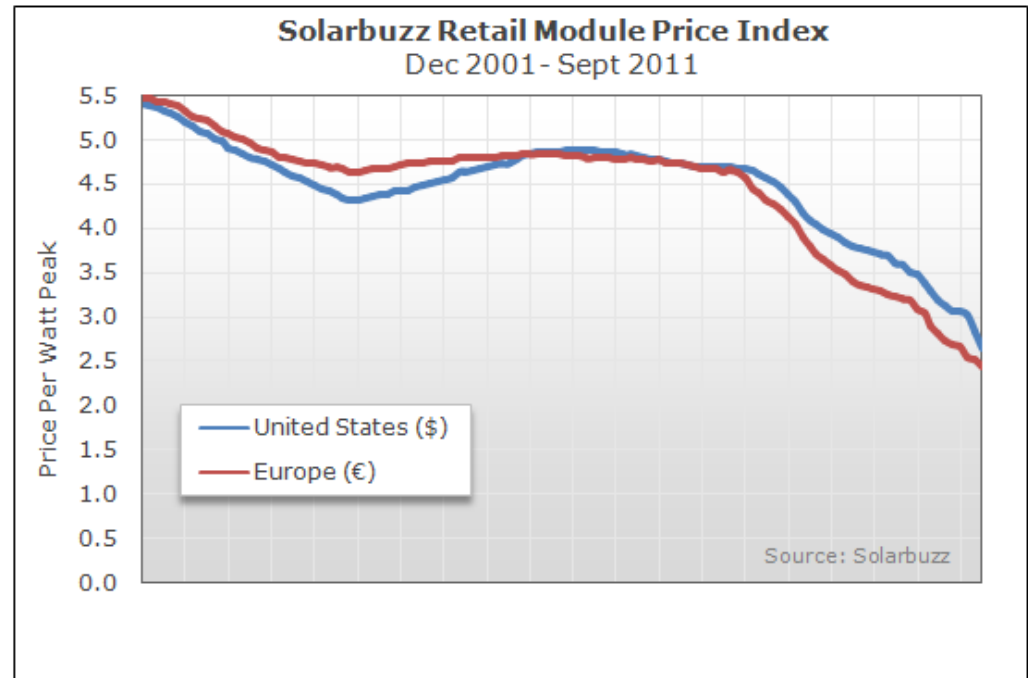


1. *Solar panels*
2. *Inverter*
3. *Monitoring System*
4. *Utility meter and panel*



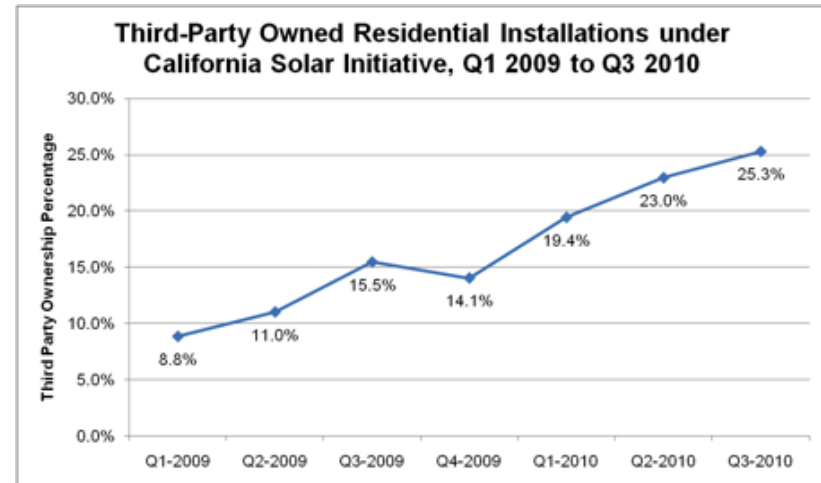
Module Pricing/Efficiency

- ▶ Dramatic reductions in cost of Photovoltaic panels
 - ▶ Impact of manufacturing investment
 - ▶ Reduced demand from European programs
 - ▶ Technology improvements
 - ▶ Foreign manufacturing efficiencies
- ▶ Efficiency
 - ▶ Slight increases in efficiency
 - ▶ Denser modules to allow more wattage/sq. inch
 - ▶ Micro-Inverters
 - ▶ Aesthetics



Financing

- ▶ Loans
 - ▶ Manufacturer's and Solar Integrators are offering loans to finance Solar projects
 - ▶ Same-As-Cash and term loans
- ▶ PPA (Power Purchase Agreement)
 - ▶ Third Party owns, maintains, and insures the system.
 - ▶ Sells the electricity directly to the customer. Customer agrees to pay a kWh rate. Usually a fixed rate or with a small escalation rate.
 - ▶ Third party receives all the available incentives and depreciation on equipment.
- ▶ Leasing
 - ▶ Similar to a PPA but is a fixed monthly payment instead a fixed rate.
****Both PPA and Lease come with little or no upfront investment from the customer.***



Rebates & Incentives

- ▶ 30% Federal Tax Credit (ITC)
- ▶ 15% State Tax Credit (up to \$1000)
- ▶ SREC's (Solar Renewable Energy Certificates)



SRECs

- ▶ What is an SREC?
- ▶ Who makes them?
- ▶ Who buys them?
- ▶ What is an SREC worth?
 - ▶ Q2 SREC's sold for \$539
- ▶ What does that mean practically?

Other Incentive Options

- ▶ Offer net metering
- ▶ Create your own rebate/incentive program
- ▶ %0 interest loans
- ▶ Opt into MRET

An Investment that Pays Dividends

5.0kW System: Annual production 6000kWh

Investment	
Cost	\$25,000
MA State Tax Credit	- \$1,000
Federal ITC	- \$7,500
Net Cost	\$16,500

Payback and ROI	
Savings: 6000 kWh x .12/kWh rate	\$720
SREC Income: 6 SRECs x \$400/SREC	\$2,400
Combined Savings and Income	\$3,120
Payback	5 years
10 year return AFTER initial investment	\$14,700
25 year return AFTER initial investment	\$25,500

Questions?

